

REMARKS

Claims 22, 23 and 28 have been cancelled. Claims 1-21, 24-27, and 29-32 are pending.

Claim Rejections – 35 U.S.C. §103(a)

The Examiner has rejected Claims 1-21, 24-27, and 29-32 under 35 U.S.C. §103(a) as being unpatentable over Davenport (U.S. Pub No. 2003/0033236) in view of Li (U.S. Pub. No. 2003/0004850) and Notani (U.S. Patent No. 7,260,550) in view of Bergstrom (U.S. Pub No. 2002/0156667) and Sandholm (U.S. Patent No. 7,716,101). The rejections are respectfully traversed.

Regarding independent Claims 1, 16, 21, and 27:

On Pages 3-4 of the Office Action, the Examiner indicates that both Davenport and newly cited reference Sandholm disclose “compar[ing] the optimal unit price to a compare value” recited in each of Claims 1, 16, 21, and 27. Each of the references will be addressed below:

Davenport

In the Remarks portion of Amendment H, Applicants provided an explanation as to why “compar[ing] the optimal unit price to a compare value” is not disclosed in Davenport. The portions of Davenport cited by the Examiner are summarized below:

Davenport at [0081]-[0082] and [0093] appears to describe the conducting of an auction in which two potential awards may be made – either a full award to B1 for \$100 (for all three types of items), or an award to a combination of B2 (one item) and B3 (two items), also for \$100. A timestamp of a bid is encoded into the bid, and timestamp information is used to select between two otherwise equal bids (i.e. the \$100 bids described in [0081] and [0082] become \$100.001 and \$100.006).

On Page 28 of the Office Action, the Examiner makes the following statement regarding the Davenport reference:

Examiner respectively disagrees that Davenport et al. do not teach comparing the optimal unit price to a compare value and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value and the optimal parameter matches a constraint. Davenport teach Bid B1 of Supplier1 is a optimal solution having optimal quantities of items {1, 2, 3} which is obtained by comparing prices and quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids (see paragraph [0077, 0081-0083]). Davenport further considers timestamp information into bid prices such that price related to B1 (p1) = \$100.01; price related B2 (p2) = \$30.02 and price related to B3 (p3) = \$70.003 and the integer programming compare Optimal price bid B1 with combined bid of B2 and B2 and select price of bid B1 as the lowest Optimal Bid)).

In reviewing the cited portions of Davenport and the Examiner's new remarks on Page 28 of the Office Action, Applicants remain unable to locate in the paragraphs of Davenport cited by the Examiner any mention of the recited comparing **an optimal unit price to a compare value**. Applicants respectfully request that the Examiner either allow the independent claims or explicitly indicate: (a) what value or values in Davenport are examples of the recited "**compare value**" (b) what value or values in Davenport are examples of the recited "**optimal unit price**" and (c) where in Davenport the aforementioned value and price are compared.

Sandholm

On Page 4 of the Office Action, the Examiner states that "Sandholm et al. also teach comparing the optimal unit price to a compare value" at 16:48-54 and 30:28-51. Applicants respectfully disagree.

Sandholm at 16:48-54 states:

In addition, the method generally described above for multi-unit combinatorial auctions can be utilized for multi-unit combinatorial reverse auctions. In multi-unit combinatorial reverse auctions, however, the method determines from the plural combination of bids an optimal combination which has a minimal sum of prices, as compared to an optimal sum of prices in the multi-unit combinatorial auction.

Sandholm at 30:28-51 states:

1. A computer-implemented method of determining one or more winning bids in a multi-unit combinatorial auction, the method comprising the steps of:

(a) receiving in a computer storage data regarding a plurality of items and the total quantity of each item available for sale;

(b) receiving in the computer storage a plurality of bids, each bid including at least one of the items of step (a) and for each item a desired quantity thereof, each bid further including a price;

(c) a computer processor determining from plural combinations of the bids of step (b) which combination of the bids has an optimal sum of prices, wherein:

the quantity of each item of said combination that can be disposed of for free is less than or equal to the total quantity of said item available for sale; and

the quantity of each item of said combination that cannot be disposed of for free is equal to the total quantity available for sale; and

(d) accepting as winning bids, the bids forming said combination, wherein:

in a forward auction the optimal sum is a maximum sum; and

in a reverse auction the optimal sum is a minimum sum.

Applicants are unable to locate in either portion of Sandholm cited by the Examiner any mention of (1) an optimal unit price, (2) a compare value, or (3) the optimal unit price being compared to the compare value. As with the Davenport reference, Applicants respectfully request that the Examiner either allow the independent claims or explicitly indicate: (a) what value or values in Sandholm are examples of the recited “**compare value**” (b) what value or values in Sandholm are examples of the recited “**optimal unit price**” and (c) where in Sandholm the aforementioned value and price are compared.

As neither Davenport nor Sandholm disclose “compar[ing] the optimal unit price to a compare value,” Applicants respectfully submit that the Examiner has not set forth a prima facie rejection of Claims 1, 16, 21, or 27 under 35 U.S.C. §103(a). Applicants respectfully request that those claims be allowed accordingly.

Regarding independent Claim 17:

Independent Claim 17 recites “supplying at least one of a corresponding value necessary to reach the optimal bid and a no feasible solution result.” The Examiner appears to state on Page 16 of the Office Action that this limitation may be found in paragraph [0083] of Davenport. Applicants respectfully disagree. Davenport, at [0083] states:

[0083] From a business point of view, these two solutions are not both equally desirable. In a multi-round procurement auction, new bids should only supercede existing winning bids if they result in a lower price being paid for the items in the auction. One way to handle such situations is to have a rule stating that, given two identical bids, the bid that was made earlier in time is to be preferred. This rule is straightforward to enforce in a simple, single or multi-item forward or reverse auction. In the context of combinatorial and volume-discount auctions, this rule becomes harder to enforce because the number of possible solutions to the winner determination problem may be exponential in the number of bids placed in the auction.

Applicants are unable to locate in that paragraph mention of either a “corresponding value necessary to reach [an] optimal bid” or “a no feasible solution result” **being supplied**. Instead, paragraph [0083] appears to discuss a difficulty in enforcing a rule in a combinatorial auction “because the number of possible solutions ... may be exponential...” Applicants respectfully request that the Examiner either allow Claim 17, or indicate where in [0083] either a “value necessary to reach the optimal bid” or “a no feasible solution result” **is supplied**.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

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